

Excel

Section 1

1. Column and row names.
2. Information that is “too wide” for a cell.
3. Information that is “Chopped Off”.
4. Make a column wider.
5. Getting the exact width.
6. Resizing a row.
7. Select a cell.
8. Select a large range of cells.
9. Select rows, Columns, and all cells in the worksheet.
10. Writing two lines in the same cell using Alt+Enter.
11. Formatting cells:
 - Font type – Font size – Font color – Bold – Italic – Underline – Fill color – Cell borders.
 - Show numbers in the cells as currency:
 - Number ----> Accounting Number Format.
 - Show numbers as percent:
 - Number ----> Percent Style.
 - Show numbers with comma:
 - Number ----> Comma Style.
 - Show more decimal points:
 - Number ----> Increase Decimal.
 - Show fewer decimal points:
 - Number ----> Decrease Decimal.
 - The original number with all of its decimal points is used in calculations.
12. Format cells.
13. Formulas: we must write = sign before writing the formula.

- A1=10, B1=2, C1=5
- In cell A3, =A1+3 ----> 13.
- In cell A4, =10- B1 ----> 8.
- In cell B3, =C1^2 ----> 25.
- In cell B4, =A1/2 ----> 5.
- In cell C3, =100/5 ----> 20.
- In cell C4, = A1*C1 ----> 50.

14. Complex formulas:

- A1=10, B1=2, C1=5
- In cell A6, =(A1+B1)*C1 ----> 60.
- In cell A7, =A1^2+B1*C1 ----> 110.
- In cell A8, =(A1^2+B1)*C1 ----> 510.

15. Orders of Operations:

- All parentheses ()
- Exponents ^
- Multiplication * and Division /
- Addition + and Subtraction –
- In cell A1, =3*2+1---->7
- B1=3, C1=2.
- In cell D1, =C1*(A1+B1) ----> 20.
- A2=2, B2= 4.
- In cell C2, =(10*A2-10)+(20*B2-20)+30 ----> 100.
- In cell D2, =(3+2*(10/A2+3)/8)*(3+B2) -----> 35.

16. Functions: FunctionName(Parameters)

- Sum:
 - In sheet2 in cell A1, =Sum (1; 2; 3; 4; 5) ----> 15.
 - A2=5. In cell B1, =Sum (A1; A2) ----> 20.
 - In cell C1, =Sum (A1; A2; 5) ----> 25.
- Average – Count – Min – Max.

17. Function calls with multiple parameters:

- A1 =2 , B1 =4 , C1=3.
- In cell A5, =Sum (A1; B1; 5 ; C1) ----> 14.
- In cell B5, =Sum (A1; B1; 5; 10) ----> 21.

18. Ranges:

- In cell C5, =Sum(A1: C1;5) ----> 14.
- A2=5 , B2=10.
- In cell D1, =Sum (A1; A2; B1; B2).
- In cell D2, =Sum (A1:B2).

19. Entire Rows: RowName : RowName

- A1=10, B1=20, C1=30, D1=40, E1=50
- In cell A4, =Sum (1:1) ----> 150.
- A2=1, B2=2, C2=3, D2=4, E2=5
- In cell B4, =Sum (1:1; 2:2) ----> 165.
- A3=1, B3=2, C3=3, D3=4, E3=5
- In cell C4, =Sum (1:3) ----> 180.

20. Entire Columns: ColumnName:ColumnName

- A1=10, A2=20, A3=30, A4=40, A5=50
- In cell D1, =Sum (A: A) ----> 150.
- B1=1, B2=2, B3=3, B4=4, B5=5
- In cell D2, =Sum (A: A; B: B) ----> 165.
- C1=1, C2=2, C3=3, C4=4, C5=5
- In cell D3, =Sum (A: C) ----> 180.

Section 2

1. References to cells on other worksheets:

- Cell on another sheet: SheetName!CellName
 - i. Cell A1 in sheet2=10.
 - ii. In cell A1, =Sheet2!A1+5 -----> 15.
- Range on another sheet: SheetName!Range
 - i. Cell A1 in sheet2=10, A2=20, A3=30, A4=40.
 - ii. In cell A2, = Sum (Sheet2!A1:A4) -----> 100.

2. Absolute and Relative Cell Reference:

- Relative Cell Reference (A1, A2)
 - i. A1=10, A2=20.
 - ii. In cell A3, =A1+A2 -----> 30.
 - iii. Copy the value from A3 and paste it in cell A4 then
A4 -----> A2+A3 -----> 50.
- Absolute Cell Reference (\$A\$1, \$A\$2)
 - i. In cell A3, =\$A\$1+\$A\$2 -----> 30.
 - ii. Copy the value from A3 and paste it in cell A4 then
A4 -----> 30.
- Mixed Cell Reference
 - i. In cell A3, =\$A1+\$A2 -----> 30.
 - ii. Copy the value from A3 and paste it in cell A4 then
A4 -----> 50.
 - iii. In cell A3, =A\$1+A\$2 -----> 30.
 - iv. Copy the value from A3 and paste it in cell B4 then
B4 -----> B1+B2 -----> 60.

3. Data Types for Values in Cells:

- Numeric – Text – Date – Logical.

4. Text / String / Character Data.

5. Text functions.

6. Right (Cell Name or Text; Number of Characters).

- Right (A1; 4).
- Right (A1) = Right (A1; 1).

7. Left (Cell Name or Text; Number of Characters).

- Left (A1; 4).
- Left (A1) = Left (A1; 1).

8. Mid: The middle of the text.

- Mid (Cell Name or Text; Start Position; Number of Characters).
- Mid (A1; 2; 4).

9. Concatenation: Combine two different text values.

- Using &:
 - i. =A1&A2.
 - ii. Concatenating Spaces: =A1&" "&A2.
 - iii. Concatenating Spaces: =A1&". "&A2.
 - iv. Using Left function: =Left (A1) & Left (A2).
- Using Concatenate:
 - i. Concatenate (Text1; Text2; Text3;...).

10. Lower: converts text to lower case.

- Lower (Cell Name or Text).
- A1=HELLO WORLD
- Lower (A1) -----> hello world.

11. Upper: converts text to upper case.

- Upper (Cell Name or Text).
- A1= hello world.
- Upper (A1) -----> HELLO WORLD.

12. Len: returns the number of characters.

- Len (Cell Name or Text).
- A1= hello world.

- Len (A1) ----> 12.

13. Logical values (True or False):

- Operators (>, <, >=, <=, =, <>).
- (Number or Cell Name) Operator (Number or Cell Name).
- A1=2, A2= 10.
- In cell C1, =A1>A2 ----> False.

14. If function:

- A1=10, A2=20.
- In cell B1, =If (A1>A2;"A1 is greater";"A2 is greater")
----> A2 is greater
- A1=100, A2=20.
- Cell B1 becomes ---> A1 is greater.

15. And: Returns TRUE if **all** of the parameters are TRUE.

- A1=10, A2=20, A3=5.
- In cell B2, =And (A1>A2; A1>A3) ---> False.
- A1=100, A2=20, A3=5.
- Cell B2 becomes ---> TRUE.
- A1=10, A2=-20.
- In cell B3, =And (A1>0; A2>0) ---> False
- A1=10, A2=20.
- Cell B3 becomes ---> TRUE.

16. If with And:

- A1=10, A2=20, A3=5.
- In cell B4, =If (And (A1>A2; A1>A3);"A1 is the greatest";"A1 is not the greatest") ---> A1 is not the greatest.
- A1=100, A2=20, A3=5.
- Cell B4 becomes ---> A1 is the greatest.

17. Or: Returns TRUE if **any** of the parameters is TRUE.
- A1=10, A2=-2.
 - In cell B5, =Or (A1>0; A2>0) ---> True.
 - A1=-10, A2=-2.
 - Cell B5 becomes ---> True.
18. Not: Takes ONLY ONE parameter and returns the opposite.
- A1=10.
 - In cell B6, =Not (A1<>0) ---> False.
 - A1=10, A2=5.
 - In cell B7, =Not (A1<=A2) ---> True.
19. IsBlank: returns TRUE if the value is blank and FALSE otherwise.
- In cell C1, =IsBlank (A1).
20. If with IsBlank:
- A1.
 - In cell C2, =If (IsBlank(A1); "A1 is Blank"; "A1 is not Blank") -----> A1 is Blank.
 - A1, A2=10.
 - In cell C3, =If (IsBlank(A1); A2+20; A1+A2) ----->30.
 - A1=5, A2=10.
 - Cell C3 becomes ----->15.
21. Formatting a cell to display as text (displaying zeros in cells):
- In Cell E1, 000123. The zeros will be removed.
 - i. Format ---> Format cells ---> Cell E1 becomes 000123.
 - ii. The value will be displayed on the screen as the text.

- Using apostrophe: The apostrophe (') tells Excel that the cell contains a text value.

- i. In Cell E2, '000123. The zeros will be displayed.

22. How Excel stores dates:

- Dates are stored in Excel as the number of days since Dec 31, 1899.
- Values view: A1=1/1/1900 and A2=10/1/1900.
- Formula view: A1=1/1/1990 and press ctrl+` ----> A1=1.

23. Times and dates in the same cell:

- Values view:
 - i. A1=1/1/1990 6:00 am.
 - ii. A2=1/1/1990 12:00 pm.
- Formula view:
 - i. Press ctrl+` ----> A1=1.25.
 - ii. Press ctrl+` ----> A2=1.5.

24. Date arithmetic:

- We can do arithmetic operations on dates (+,-,*, /)
 - i. =A1+7 (one week after the date in A1)
 - ii. =A1-5*7 (subtract 5 weeks from the date in A1)

25. Formatting cells with dates and times.